

Notes on the Avifauna in and around Devkhop lake of Palghar, India

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ABSTRACT

In the present paper, the Authors show the results of their research carried out on birds of a peculiar and interesting natural habitat. The Devkhop Lake is located at the Palghar-Manor highway about 5 km away from Palghar city (India). It is a perennial lake and it is a very good site for the water birds including the migratory ones. It also provides a rich diet to birds. We have surveyed the avian fauna of this area from May 2015 to February 2016 and we recorded total 31 species of birds belonging to 8 orders and 20 families. Passeriformes and Ciconiiformes are the dominating orders in our observations which constituted 60% of total birds observed in this period. The families Corvidae, Anatidae, Ardeidae were found dominant with four, four and three species, respectively. In this paper qualitative enumeration of avifauna is discussed and a comparison is made with other studies on birds found in similar habitats.

KEY WORDS

Avifaunal Diversity; Conservation; Devkhop Lake.

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INTRODUCTION

The Devkhop Lake is located at the Palghar-Manor highway about 5 km away from Palghar city. It is surrounded by deciduous forest and hillocks of Vaghoba tourist place. Vaghoba hill is the highest peak in this area. In the neighborhood there are two Adivashi padas namely Dasturi pada and Kathe Pada located at the northern and western side of the lake respectively. It is a good catchment area of rain water flowing from surrounding hillocks and the same is being utilized for irrigation, household things and fishing by local inhabitants. It is a perennial lake as government has constructed dam towards the downwards slope in the northern part of the lake which is helpful to keep water throughout the year.

Since water is available through the year and the lake is isolated from the thickly human population of Palghar city, it is a good adobe for residential and migratory birds (Fig. 1). Anon (2000) reported that the freshwater biodiversity is the most threatened of all types of diversity and wetlands are found to be the richest sites by holding major share of the existing avifauna. It is being suggested that the avifauna are important for the ecosystem as they play various roles as scavengers, pollinators and predators of insect pests (Padmavati et al., 2010). Surana et al. (2007) studied the birds of Chimdi lake of Nepal; Singh & Roy (1990) studied the ecology of birds of Kavar lake in Bihar.

During the last few decades considerable studies on avifauna diversity from different freshwater bodies of India have been carried out by re-

searchers like, Osmatston (1922), Ali (1932), Kannon (1980), Mujumdar (1984), Davidar (1985), Newton et al. (1986), Jhingram (1988), Ghosal (1995), Rathore & Sharma (1999), Yardi et al. (2004), Kulkarni et al. (2005), Kumar (2006).

The primary purpose of this paper is to integrate the principles of ecology with the social and environment problems of society. Society still fails to understand her true position in the planet and knowledge of ecology has not yet taken hold to produce the kind of wisdom needed for our own survival. Therefore, there is need of hours for ecological knowledge to be greater than ever in this modern technological advance period. The present study is carried out to find out the avian diversity and to create the awareness for their conservation.

MATERIAL AND METHODS

Study area

This study was conducted in Palghar city of Maharashtra state which is situated between Geographic coordinates of Latitude: 19°41'48" N Longitude: 72°45'55" E. Elevation above sea level: 17 m = 55 ft. It is a town and a Municipal Council located about 87 kilometers north of Mumbai. Palghar lies on the Western Line of the Mumbai Sub-



Figure 1. The Devkhop Lake of Palghar, India.

urban Railway on the busy Mumbai-Ahmadabad rail corridor. In addition to this, Tembhode Lake, Ganesh kund and other water bodies are also in the close proximity of the study area. Agriculture and fishing in this area are mainly dependent on monsoon rain. It is the administrative capital of the newly formed Palghar District.

Methods

The entire observations were conducted by rigorous field surveys all around the lake. Observations were recorded by using Nikon Action 10x50 binocular and relevant photographs were taken by Canon 700 D.

Birds were identified with the help of noting, standard methods given by Ali & Ripley (1969, 1995), Ali (1996, 2002), Grimmett et al. (1999).

RESULTS AND DISCUSSION

Birds are considered as useful biological indicators because they are ecologically versatile and live in all kinds of habitats as herbivores or carnivorous. They are susceptible to the change in wetlands or other ecosystems. Some birds are migratory, which are responsible for fluctuation in the population of birds that occurs during different seasons of the year, which may help to know whether an area is normal or getting polluted, as total absence of birds may be considered as pollution indicator (Borale et al., 1994). A total of 31 birds belonging to 8 orders and 20 families were recorded between May 2015 and February 2016 from Devkhop lake and its surrounding area (Table 1). This is the first record of avian biodiversity of Devkhop Lake in Palghar district of Maharashtra state in which the Lake exhibits qualitative variation in avifauna.

Order Passeriformes (14 species) was the most represented followed by Ciconiiformes (7), Anseriformes (4), Coraciformes (2), Charadriiformes (2), Columbiformes (1), Apodiformes (1), and Gruiforme (1) (Fig. 2).

The families Anatidae and Ardeidae were found dominant with four and three species, respectively indicating the wetlands moderately support shorebirds. The other families were as follows: Muscipidae (2), Motacillidae (2), Pycnonotidae (2)

ORDER	FAMILY	SCIENTIFIC NAME	COMMON NAME
PASSERIFORMES	MUSCICAPIDAE	<i>Saxicolodius fulicata</i> (Linnaeus, 1766)	Indian Robin
		<i>Copsychus saularis</i> (Linnaeus, 1758)	Magpie Robin
	MOTACILLIDAE	<i>Motacilla cinere cinere</i> (Tunstall, 1771)	Grey wagtail
		<i>Motacilla flava</i> (Swinhoe, 1863)	Yellow wagtail
	STURNIDAE	<i>Acridotheres tristis</i> (Linnaeus, 1766)	Common myna
	NECTARINIIDAE	<i>Nectarinia minima</i> (Sykes, 1832)	Smallsun bird
	HIRUNDINIDAE	<i>Hirundo daurica daurica</i> (Linnaeus, 1771)	Redrumped swallows
	PYCNONOTIDAE	<i>Pycnonotus cafer</i> (Linnaeus, 1766)	Red vented Bulbul
		<i>Pycnonotus jocosus</i> (Linnaeus, 1758)	Redwhiskered bulbul
	LANIIDAE	<i>Lanius excubitor</i> (Sykes, 1832)	Great grey shrike
	DICRURIDAE	<i>Dicrurus adsimilis</i> (Vieillot, 1817)	Black drongo
	CORVIDAE	<i>Corvus splendens</i> (Vieillot, 1817)	House crow
		<i>Corvus macrorhynchos</i> (Sykes, 1832)	Jungle crow
	PLOCEIDAE	<i>Passer domesticus indicus</i> (Jardine et Selby, 1835)	House sparrow
ANSERIFORMES	ANATIDAE	<i>Anas poecilorhyncha</i> (J.R. Forster, 1781)	Spot bill duck
		<i>Anas crecca</i> (Linnaeus ,1758)	Common teal
		<i>Nettapus coromandelianus</i> (Gmelin, 1789)	Cotton teal
		<i>Anas clypeata</i> (Linnaeus, 1758)	Shoveller
CICONIIFORMES	ARDEIDAE	<i>Ardeola grayii</i> (Skyles, 1832)	Pond heron
		<i>Egretta garzetta</i> (Linnaeus, 1766)	Little Egrets
		<i>Bubulcus ibis</i> (Boddaret, 1783)	Cattle Egrets
	PHALACROCORACIDAE	<i>Phalacrocorax niger</i> (Vieillot, 1817)	Little cormorant
		<i>Phalacrocorax fuscicollis</i> (Stephens, 1826)	Indian shag
	CICONIIDAE	<i>Anastomus oscitans</i> (Boddert, 1780)	Asian open bill stork
	THRESKIORNITHIDAE	<i>Pseudibis papillos</i> (Temminack, 1824)	Black ibis
CORACIFORMES	ALCEDINIDAE	<i>Halcyon smyrnensis</i> (Oberholser, 1915)	Whitebreasted Kingfisher
COLUMBIFORMES	COLUMBIDAE	<i>Streptopelia chinensis</i> (Gmelin, 1789)	Spotted dove
CHARADRINIIFORMES	JACANIDAE	<i>Hydrophasianus chirurgus</i> (Scopoli 1786)	Pheasant-tailed jacana
		<i>Metopidius indicus</i> (Latham, 1790)	Bronzewinged jacana
APODIFORMES	APODIDAE	<i>Cypsiurus parvus</i> (J.G.Gray,1829)	Palm swift
GRUIFORMES	RALLIDAE	<i>Fulica atra atra</i> (Linnaeus, 1758)	Common Coot

Table 1. Check list of birds which were observed in Devkhop Lake from May 2015 to February 2016

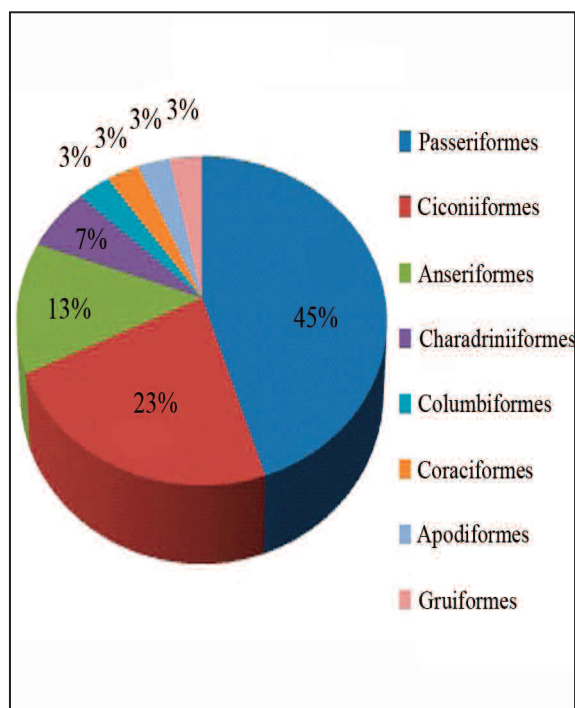


Figure 2. The Order wise distribution of avian fauna at Devkhop Lake of Palghar, India.

Corvidae (2), Phalacrocoracidae (2), Jacanidae (2), Sturnidae (1), Nectariniidae (1), Hirundinidae (1), Laniidae (1), Dicruridae (1), Ploceidae (1), Ciconiidae (1), Threskiornithidae (1), Alcedinidae (1), Columbidae (1), Apodidae (1), and Rallidae (1) (Fig. 3).

As far as the Authors know, a similar type of study was carried out by Vikas (2015), where 99 birds' species were recorded in Vansda National Park, Gujarat. Kurhade (1991) recorded 51 bird species in Ahmednagar district. Vyawahare (1991) listed 245 bird species in Dhule district of Maharashtra. Prashant et al. (1994) in their study of coastal area of Nellore district recorded 78 species of birds. Terdalkar et al. (2005) listed 45 species of birds belonging to 18 families around Bhatye estuary, Ratnagiri.

The present work is an attempt to establish the richness of the Devkhop Lake in respect of avian fauna as birds are excellent indicators of ecological health. From the above results it could be made out that the availability of water, safe habitat and food sources for both common and mi-

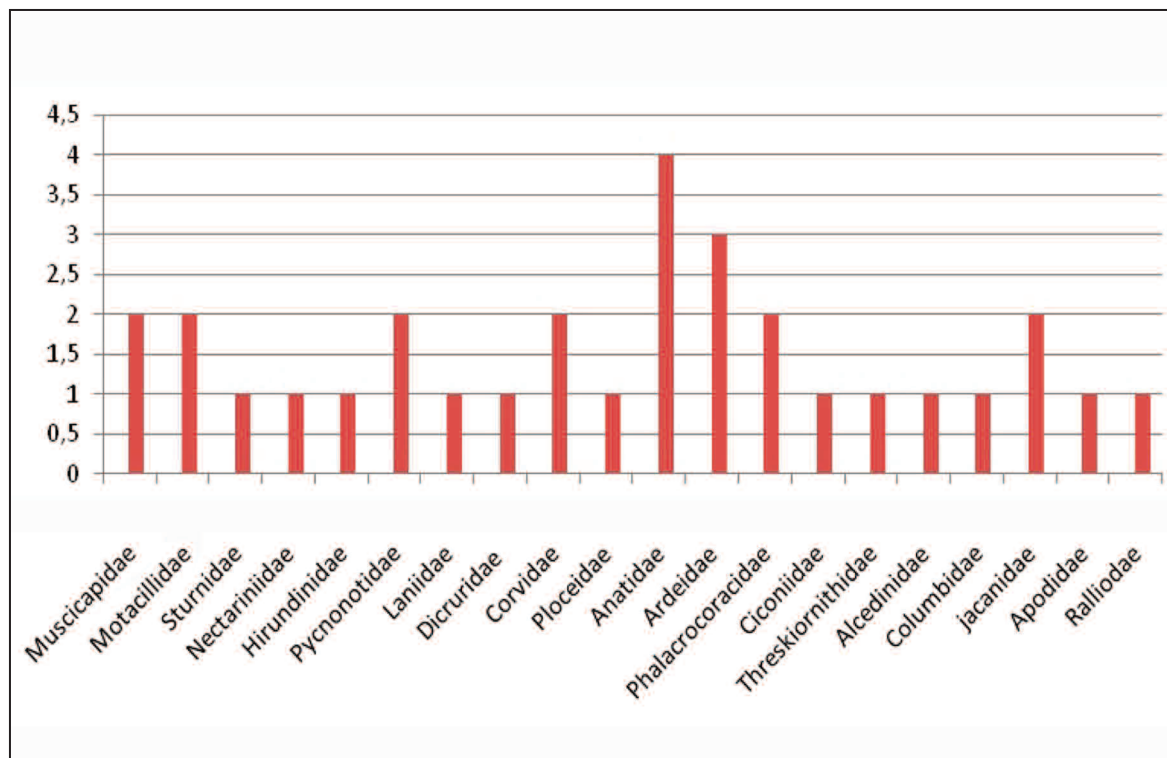


Figure 3. The family wise distribution of avian fauna at Devkhop Lake of Palghar, India.

gratory birds around the water bodies are important for the occurrence and abundance of avian population.

CONCLUSIONS

Around 31 species of birds belonging to 8 orders and 20 families were recorded in the study area. The proper and regular maintenance of district water bodies would further increase the avian diversity / population along with the incessant bird lovers' interest for this region.

During our study we also found that local inhabitants were collecting the eggs from the lake which is the cause of great concern for the richness of this ecosystem and in turn its conservation. Further intensive study of Devkhop lake is required to develop this place for avian conservation and tourists' pleasure.

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